DRAFT
Transportation Concept Report
State Route 33
November 2006

I. INTRODUCTION

This Transportation Concept Report (TCR) is a long-range system-planning document that establishes a planning concept for a state highway corridor through the year 2030. The TCR provides the route, traffic data, and operating characteristics for the current – 2006, and future years - 2015 and 2030, for Caltrans District 6 State highway corridors.

Considering reasonable financial and physical constraints, the TCR defines the appropriate Route Concept Level of Service (LOS) and facility type(s) for each route. It also broadly identifies the nature and extent of improvements needed to attain the Route Concept LOS. For the purpose of this document, capacity-enhancing improvements such as lane additions are the primary focus for LOS attainment.

Caltrans endeavors to maintain a target LOS at the transition between LOS of C and D on State highway facilities, or whichever LOS is feasible to attain. The Concept LOS is a "target" LOS determined by the importance of the route and environmental factors. A deficiency or a need for improvement is triggered when the actual LOS falls below the Concept LOS.

This TCR also identifies existing mass transit and the deployment of Intelligent Transportation Systems (ITS) as integral to route corridor development.

The Ultimate Transportation Corridor (UTC), as identified in this TCR, ensures that adequate right-of-way (ROW) is preserved for ultimate facility projects beyond 2030. The UTC does not consider funding as a constraint. The System Planning unit should be consulted for the interim right-of-way (prior to ultimate construction) at a specific location along the corridor.

This document identifies the initial and conceptual planning phase that leads to subsequent programming and the project development process. Consequently, the specific nature of proposed improvements, such as roadway width, number of lanes, and access control may change in later project development stages.

Final determinations are normally made during the project report and design phases. Therefore, this TCR is a "living document," subject to amendments as conditions change and projects are completed. Caltrans District 6 System planning staff will update the TCR on a three-to-five year cycle or as needed.

This TCR for State Route (SR) 33 was prepared and completed by the Caltrans District 6 System Planning unit in cooperation with local and regional agencies and other Caltrans functional units. As such, it will serve as a guide in cooperative planning and implementation of transportation and land use decisions.

II. ROUTE DESCRIPTION AND PURPOSE

Begins: At Route 101 near the City of Ventura in Ventura County
Ends: At Route 5 just southeast of Tracy in San Joaquin County

Length: 289-mile highway in Ventura, Kern, Kings, Fresno, Merced, Stanislaus and San Joaquin Counties.

This Transportation Concept Report covers 165 miles of SR 33 within District 6, from the San Luis Obispo/Kern County Line to the Fresno/Merced County Line. Route 33 encompasses Kern, Kings and Fresno Counties. At the beginning of the TCR is a map showing the location of Route 33 within District 6 and the State of California. It also shows the 28 segments of SR 33 in Kern, Kings and Fresno County (Segment Map, page "i")

Land Use: The highway travels across primarily oil fields, agriculture and grazing land of the western San Joaquin Valley. Cities and communities located along the route involved in the oil industry include Maricopa, Taft, Coalinga and McKittrick. The agriculture industry cities consist of Avenal, Mendota and Firebaugh. In the City of Avenal a state prison is located within its city boundaries. Commercial land use exists within the cities' boundaries. There is residential use within the incorporated cities.

Terrain: Generally on flat and rolling terrain throughout the route; however, there is mountainous terrain in southern Kern County near the San Luis Obispo/Kern County Line.

A. Modal Alternatives

Passenger Rail Services: Amtrak, via its San Joaquin Route, runs six passenger trains through the San Joaquin Valley on a daily basis with stops in Bakersfield, Wasco, Corcoran, Hanford and Fresno. However, none of these cities are traversed by Route 33.

Transit Services: Both fixed-route and dial-a-ride buses serve the local travelers in the Kern, Kings and Fresno Counties. Currently no transit provider runs the entire length of this route. Neither, Greyhound or the Orange State Line, two of the area's regional carriers, uses any portion of the route for scheduled services.

For a segment by segment list of specific transit providers, please see the Transit Services chart in the Appendix at the end of the TCR.

Bicycle Routes - From its District 6 beginning at the San Luis Obispo County Line to its District 6 terminus at the Merced County, Route 33 is comprised solely of conventional 2 and 4-lane highway segments. All segments are currently opened to bicycle travel.

Please refer to the "Bicycle Facilities" section of the Appendix for more detailed information on bicycle access along Route 33.

Pedestrian Access / Facilities - Pedestrian, and possible ADA concerns, are to be found primarily in and near the cities of Maricopa, Taft, McKittrick, Avenal, Coalinga, Mendota and Firebaugh. The remainder of this route is very rural with few if any pedestrian or ADA concerns needing to be addressed. However, should any future project be constructed along any portion of this highway pedestrian and ADA concerns such as crosswalks, sidewalks, curb cuts, ramps and railings, may need to be addressed.

Please refer to the "Pedestrian Access / Facilities" section of the Appendix for more detailed information on pedestrian and ADA access along Route 33.

B. Intelligent Transportation Systems (ITS)

Numerous applications of ITS exist or are proposed throughout the extent of Route 33. Examples of existing ITS applications along Route 33 are: weather stations (WS) changeable message signs (CMS), and highway advisory radio (HAR). Deployment of ITS technology will enhance operational and safety efficiency of the route by informing motorists of traffic congestion, inclement weather such as fog, dust, highway construction and/or closings. The Caltrans Central Valley Transportation Management Center (TMC) monitors specific traffic locations from its headquarters at the District Office in Fresno.

Specific information on ITS is located in the Appendix.

C. State Route 33 Highway Facts

- Route 33 was included as part of the State Highway System between 1915 and 1955.
- It was also included in the California Freeway and Expressway System in 1959.
- Route 33 is an alternate north-south corridor along the San Joaquin Valley's westside from Los Angeles to San Francisco/Sacramento.
- There are breaks in Route 33 at the SR 33/SR 145/ I-5 interchange near Coalinga and on Route 152 near Los Banos.
- Route 166, 58, 145, and 198 coincide with Route 33 in different sections.
- Eligible as a State Scenic Highway between the City of Coalinga and I-5.

D. Environmental Considerations

Specific sensitive biological species include, but are not limited to, the following flora and fauna:

FLORA – Kern mallow plants.

FAUNA – San Joaquin antelope squirrel, San Joaquin kit fox and Tipton kangaroo rat.

In addition, west of Maricopa, the highway crosses a National Wildlife Refuge, which is subject to the requirements of Section 4(f) of the U.S. Transportation Act of 1966. Throughout its length within District 6, the highway is surrounded by endangered species habitat. Other environmental concerns include historic properties, hazardous waste, and displacement of businesses and homes in the small rural cities and communities.

III. Geometrics, Land Use, and Environmental Considerations

Segments 1-8: San Luis Obispo (SLO)/Kern County Line to Junction Route 58 East

Begins: At Kern Co Line
Ends: At JCT Route 58 east

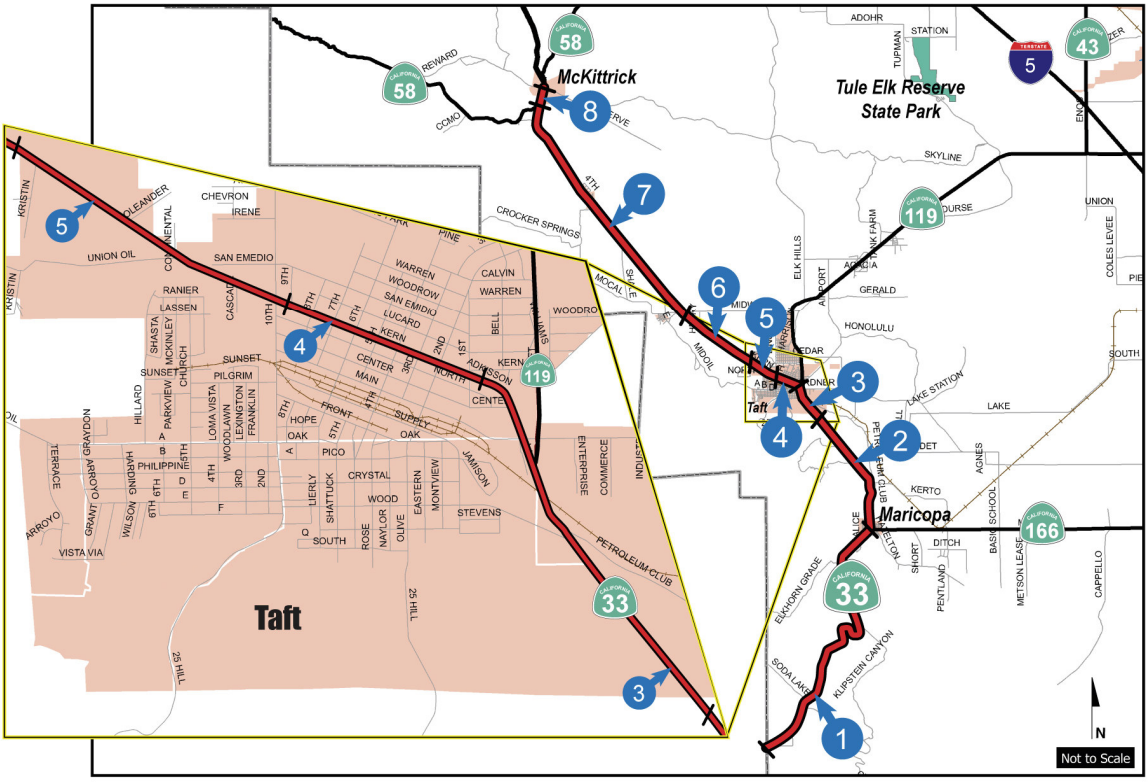
Land Use: Along with the rural cities of Maricopa and Taft, the land use consists of enormous oil wells, along with related tanks and facilities. The Midway-Sunset oil field is the largest oil field in the United States, excluding Alaska. It is located between Maricopa and Taft.

Facility: With the exception of the section in Taft (segment 4) which is a 4-lane conventional highway, it is mainly a 2-lane conventional highway. Rolling hills with arid terrain make up the landscape, with the exceptions of flat land in the urban segments. There are passing lanes throughout this section.

Interchanges and other State highway connections:

- There is an intersection with Route 119 in the City of Taft.
- For over eleven miles Route 33 coincides with Route 166 from the SLO/Kern County Line to the City of Maricopa.
- For less than a mile, Route 33 coincides with Route 58 through the town of McKittrick.

Environmental/Historical Resources: The environmental concerns include crude petroleum close to the surface and water issues.



Segments 9-11: Junction (JCT) Route 58 East to Kern/Kings County Line

Begins: At JCT Route 58 east
Ends: At Kern/Kings Co Line

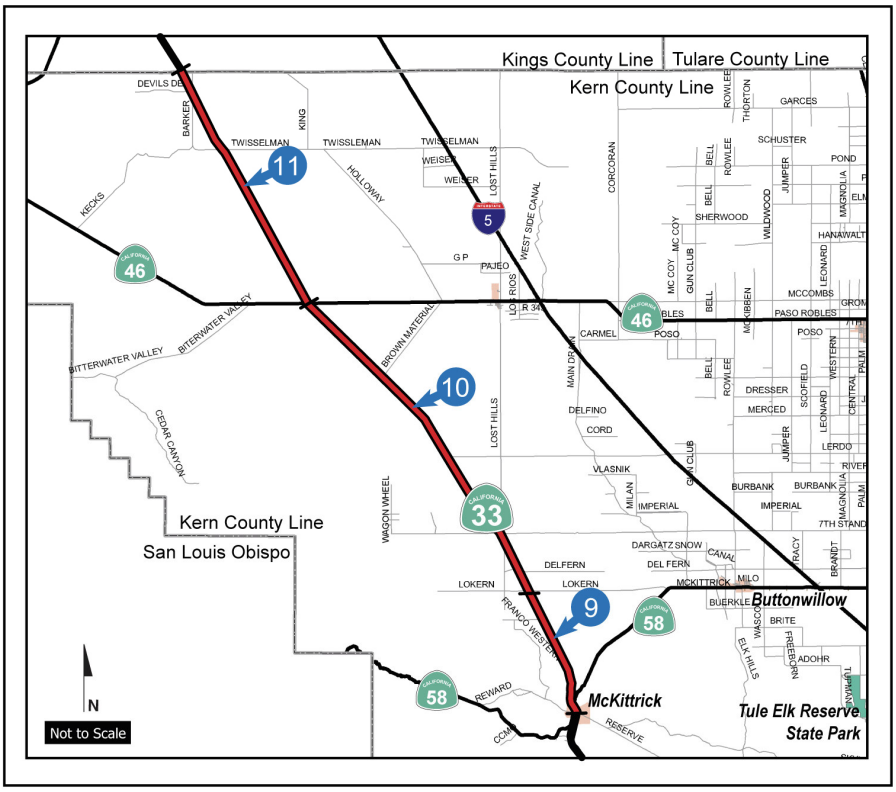
Land Use: Oil production and reserves on this stretch of the highway are visible for many miles. The state's five largest producing oil fields are in Kern County. Along these segments exist long stretches of rural land with no community development.

Facility: This section of the route is a 2-lane conventional highway. All throughout this portion of the route the terrain is rolling. The shoulders are very narrow.

Interchanges and other State highway connections:

- There are existing intersections with Route 58 and with Route 46.

Environmental/Historical Resources: There are restrictions to protect the Kern Mallow Plants. Other environmental concerns include crude petroleum close to the surface and water issues.



Segments 12-14: Kern/Kings County Line to Kings/Fresno County Line

Begins: At Kern/Kings Co Line
Ends: At Kings/Fresno Co Line

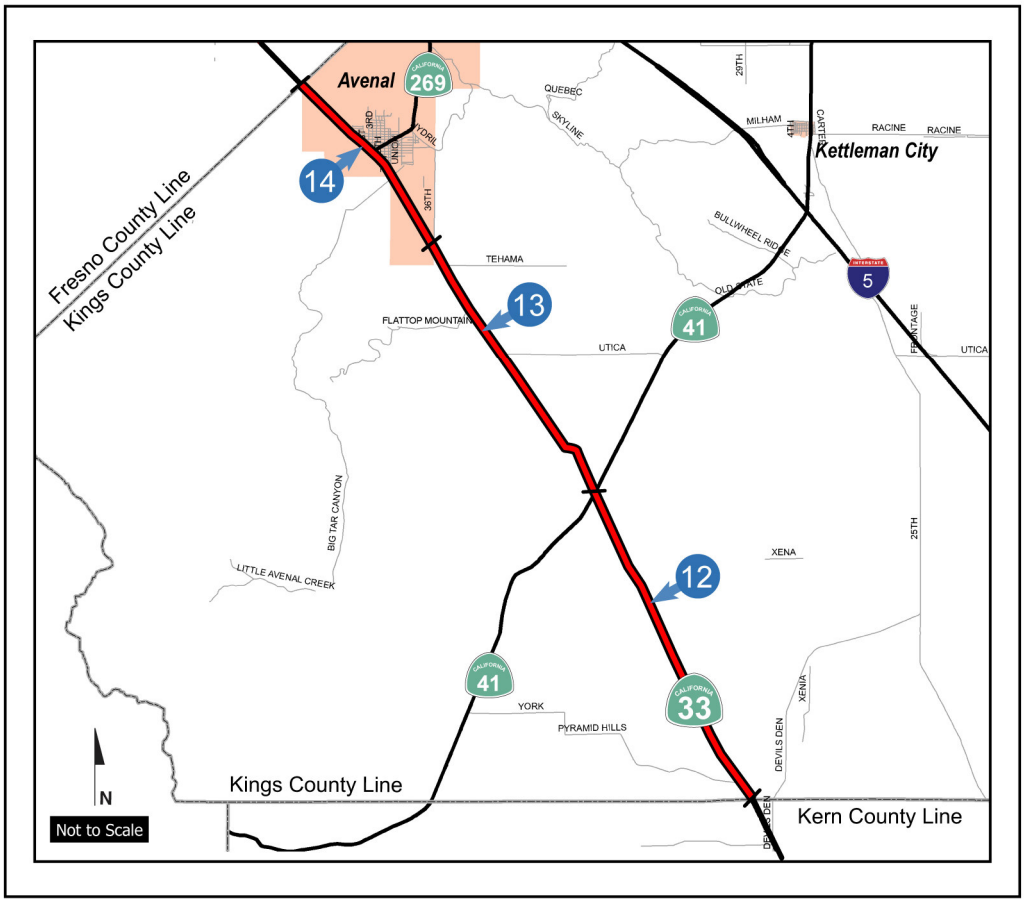
Land Use: The City of Avenal is the only city that exists along this long section of rural land. A State prison was built in 1987 within the Avenal city limits. Avenal State Prison is designated as a low-to-medium security institution.

Facility: These segments are composed of a 2-lane conventional highway. The terrain is rolling except for the City of Avenal. The treated shoulders are narrow.

Interchanges and other State highway connections:

- There is a major intersection with Route 41.
- An at-grade connection occurs with Route 269 in the City of Avenal.

Environmental/Historical Resources: The environmental concerns would include water issues.



Segments 15-22: Kings/Fresno County Line to South Junction Route 145/33/I-5 Separation

Begins: At Kings/Fresno Co Line
Ends: At S JCT RTE 145/33/I-5 Separation

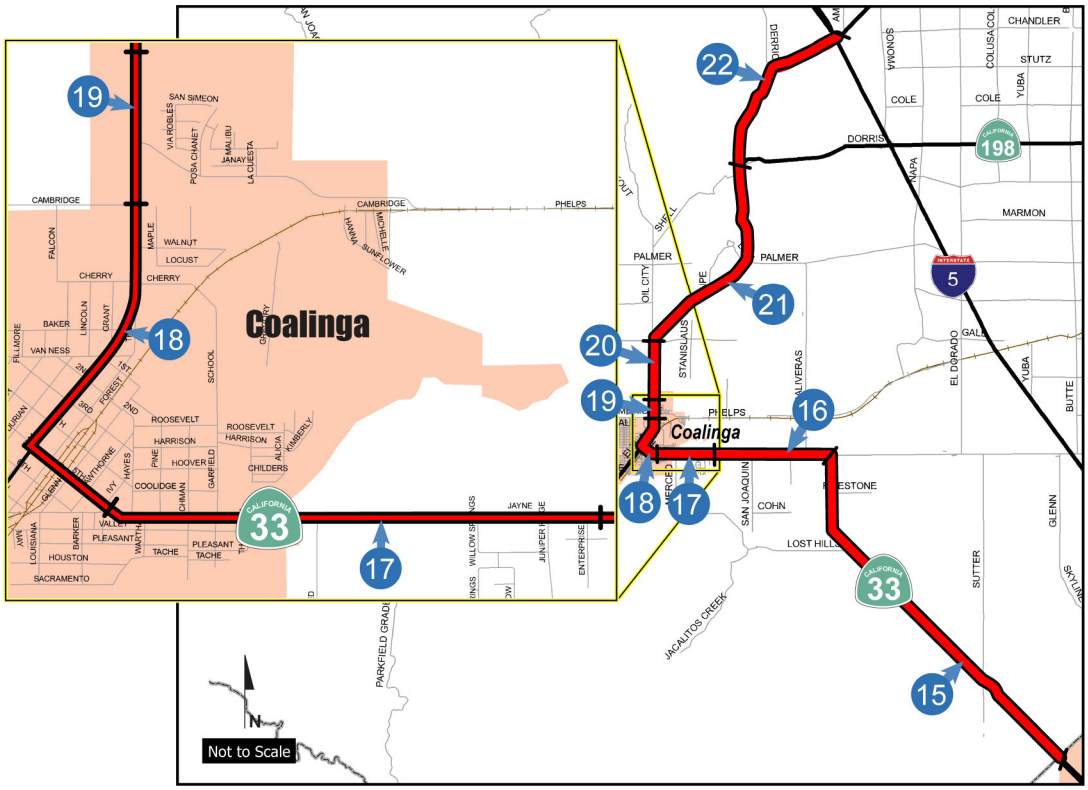
Land Use: The City of Coalinga is the only city along this long section of rural road. It is celebrating its 100th year anniversary as an incorporated city this year. Oil production, oil reserves and especially the oil wells, which are painted as animal or insect characters, are very visible from the roadside. Pleasant Valley State Prison is located near Coalinga, just several miles west of Route 33 on Jayne Avenue. Sheep grazing near the west hills of Coalinga is prevalent. At the Route 33/145/I-5 intersection, is Harris Ranch, one of the largest beef and food agribusinesses in the West. The ranch can hold up to 100,000 beef cattle.

Facility: With the exception of the 4-lane segments in the City of Coalinga (segments 18, 19), it is mostly a 2-lane conventional highway. With the exception of the rolling hills north of Coalinga, the terrain is flat.

Interchanges and other State highway connections:

- For over nine miles, Route 33 coincides with Route 198.
- Route 33 coincides with Route 145 to the east at the Interstate 5 intersection.

Environmental/Historical Resources: The environmental concerns would include water rationing issues relating to agricultural irrigation.



Segments 23-28: North Junction Route 33/I-5 Separation to Fresno/Merced County Line

Begins: At N JCT RTE 33/I-5 Separation
Ends: At Fresno/Merced Co Line

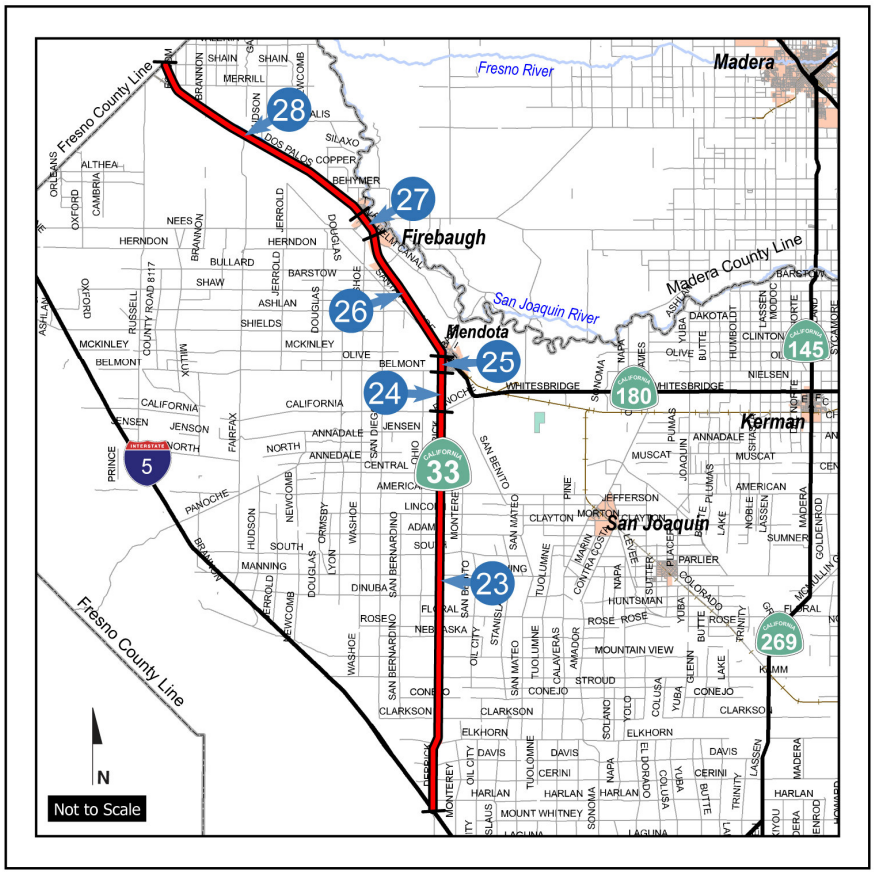
Land Use: In and along the rural cities of Mendota and Firebaugh, the land use consists mostly of very productive agriculture. Cantaloupes and cotton are major crops grown along with various vegetables. There are several cantaloupe-packing sheds and a tomato processing plant. Route 33 is a very important highway by which agricultural goods are transported to Interstate 5, a major inter-modal corridor of economic significance.

Facility: With the exception of the segments in the City of Mendota and Firebaugh which is a 4-lane conventional highway, it is mostly a 2-lane conventional highway or 2-lane expressway. The terrain is flat throughout this entire section.

Interchanges and other State highway connections:

- There is a break in the route for over ten miles, reconnecting at the Derrick Boulevard I-5 off-ramp.
- There is an intersection with Route 180 in the City of Mendota.

Environmental/Historical Resources: The environmental concerns would include water-rationing issues relating to agricultural irrigation.



IV. Concept Rationale

Route Concept LOS: LOS D is assigned to both the rural and urban portions. A vast majority of the route is rural, having some small cities that are not projected to have significant growth. There is not much diversity in the route and in the existing level of service throughout.

Concept Facility:

The 2030 Concept Facility for Route 33 varies depending on whether it is rural/urban, the existing facility and other influential factors. The following shows the Concept Facility for the route segments.

2-lane conventional highway (Segment 1-3, 5- 17, 20 – 23, 26, 28): There are no projected additional lanes in these segments. The segments are rural with the exception of the City of Avenal (Segment 13-14) & Cities of Maricopa/Taft (Segments 2-3, 5). Possible improvements include adding turn lanes, signals, passing lanes, etc.

4-lane conventional highway (Segments 4, 18 – 19, 25 & 27): There are no projected additional lanes in these urban sections of Taft (Segment 4), Coalinga (Segments 18-19), Mendota and Firebaugh (Segments 25 & 27). The existing 4-lane conventional highway will remain four lanes.

2-lane expressway with improvement (Segments 24): Two additional lanes are to be added partially to the existing 2-lane expressway segment just north of the Mendota city limits. The segment will improve to a 4-lane expressway.

The Ultimate Transportation Corridor (UTC-beyond 2030): The Maricopa/Taft area (Segments 1-7) has a UTC projected to be a 4-lane conventional highway. In Avenal (Segment 14) the UTC is a 4-lane conventional highway. Within the Coalinga area (Segments 17-20) a 4-lane conventional highway is the UTC projected. Mendota and Firebaugh's (Segments 24-27) UTC is 4-lanes. The remaining segments (Segment 8-11, 12, 13, 15, 16, 21-23, 28) have a UTC of a 2-lane conventional highway with possible improvements.

V. State Route 33 Transportation Concept Report Summary Chart

The 6-page Summary Chart following this section indicates that SR 33 is divided into 28 distinct segments that provide descriptive and technical information, both current and forecast, for the State highway. It also has a linear geographic diagram that illustrates the major State and local highway facilities, along with key natural features and City/County boundaries, current highway geometrics, i.e., conventional highway, expressway, or freeway. A "Chart Explanation" bar defines what is shown on the Chart with the exception of self-explanatory technical information. The Summary Chart also delineates the functional classification, various highway designations, environmental information, and General Plan information.

Pages 11 - 16 should be the Summary Charts which are available in a separeate file on this website.

VI. A Review of Route 33 Performance: Current and Future

A comparison of the current and future operating traffic LOS to the designated Route Concept LOS is a way of measuring the existing and future performance levels on a State highway. For purposes of this review, a segment on State Route 33 is deficient when it operates below the designated Route Concept LOS of D. Please refer to the State Route 33 Transportation Concept Report Summary Chart in Section V for current and future route operations.

As of the year 2006, Route 33 is operating at a range of LOS B to LOS D. The urban areas are operating at LOS D or better, whereas the rural areas are operating at LOS C or better.

By the year 2030, Route 33 is projected to operate at LOS B, C, D and E without improvements in District 6. Over fifty percent of the route (Segments 2, 3, 4, 7, 9, 11, 12, 14, 15, 18, 20-25, 28) is projected to operate at LOS C or better. Less than ten percent of the route is projected to operate at LOS E (Segments 5, 6, 26) and will not meet the Concept LOS of D.

With improvements, the Route Concept LOS is projected to be met on Segment 24, just south of the Mendota city limits. The rest of the route has no improvements planned, but yet meets the Concept LOS D with the exception of Segment 26.

Planned projects on Route 33 consist of widening a 2-lane expressway to a 4-lane expressway (Segment 24). The project is included in the Regional Transportation Plan (RTP).

VII. Planned and Programmed Capacity-Increasing Improvements to Route 33

The following table in this section shows both the planned and programmed *capacity-increasing* projects for Route 33 over the next 25 years. The table shows the segment, project, listing document, description, and projected completion date.

Note: only those segments with planned and/or programmed projects are listed.

Project scope and technical data are for general informational purposes only. If current information is needed, please verify with the Caltrans District 6 Office of Advance Planning at (559) 445-4162.		
Segment PM From/To	**SR 33 Planned Projects**	**SR 33 Programmed Projects**
24 FRESNO PM 59.4-61.4 CALIFORNIA AVE To BELMONT AVE	**RTP:** FRE 33 PM 60.3-61.4 JCT unconstructed Route 180 to Mendota City limits: *Widen from 2-lane expressway to 4-lane expressway (>2030).*	There are no capacity-improving projects currently programmed for this segment.

See the Appendix for References, Glossary, and additional information on Intelligent Transportation Systems, Transit, and Bicycle Facilities.